

R-GAGE™ QT50R Sensors

Reliable sensing using cutting-edge radar technology



Advanced radar-based sensor for reliable detection of moving or stationary objects

The R-GAGE™ QT50R uses Frequency Modulated Continuous Wave (FMCW) radar to reliably detect moving or stationary targets, including cars, trains, trucks and cargo. Immune to extreme weather conditions, the QT50R effectively resists rain, wind, humidity and temperature to accurately deliver presence, absence or change information about the observed target.

State-of-the-art presence detection for a broad range of weather conditions

- ▶ Uses FMCW technology for detecting moving and stationary targets
- ▶ Provides presence, absence or change information for a detected target
- ▶ Detects objects up to a specified distance, ignoring objects and backgrounds beyond the setpoint
- ▶ Operates at 24 GHz in the Industrial, Scientific and Medical (ISM) telecommunication band; no special licensing required
- ▶ Features rugged IP67 housing for harsh environments
- ▶ Withstands extreme temperature conditions and exposure to strong wind
- ▶ Detects vehicles at distances up to 15 m
- ▶ Includes DIP switches for sensing distance, sensitivity and output configuration
- ▶ Provides 12 to 30V dc operation with bipolar PNP (sourcing) and NPN (sinking) output
- ▶ Features bright LED indicators for easy status monitoring

*Patent pending

True-presence radar paired with exceptional environmental resistance



An innovative solution for a wide variety of outdoor and other challenging applications

- ▶ Cargo positioning and detection on a truck bed
- ▶ Truck detection at a loading dock
- ▶ Access control to parking ramps and garage doors
- ▶ Car detection in drive-thru
- ▶ Position sensing of cranes
- ▶ Car detection and counting in tollbooths
- ▶ Train and tram detection and location in tunnels



Robust operation in a simple-to-use, easy-to-configure package

- ▶ Features robust housing with a 30 mm threaded mounting base
- ▶ Offers 2 m attached cable or 5-pin Euro-style quick-disconnect
- ▶ Provides simple DIP switch configuration of the sensing field
- ▶ Features bipolar PNP and NPN output; selectable normally open (NO) or normally closed (NC) operation
- ▶ Delivers operating temperature range of -40° to +65° C
- ▶ Provides IP67 rating for harsh environments
- ▶ Offers bright LED status indicators on sensor top

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more sensors, more solutions

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R-GAGE™ QT50R Models, 12 to 30V dc



Models	Telecom Approval	Range	Cable*	Output	Data Sheet
QT50RAF-US	FCC part 15 approved for US and Canada	15 m	2 m	Bipolar NPN/PNP Selectable NO or NC	135460
QT50RAF-EU	Europe except France and UK				
QT50RAF-UK	UK				
QT50RAF-FR	France				

* For a 5-pin Euro-style QD, add suffix **Q** (example, **QT50RAFQ-US**). A model with a QD requires a mating cordset.

Specifications

Range	15 m
Detectable Objects	Objects containing metal, water or similar high-dielectric materials
Operating Principle	Frequency Modulated Continuous Wave (FMCW) radar
Operating Frequency	24 GHz, ISM band (varies slightly with national telecom regulations)
Supply Voltage	12 to 30V dc, less than 100 mA (exclusive of load)
Supply Protection Circuitry	Protected against reverse polarity and transient overvoltages
Delay at Power-up	Less than 2 seconds
Output Configuration	Bipolar NPN/PNP output
Output Protection	Protected against short circuit conditions
Indicators	Power LED: Green (power ON) Signal strength LED: Red, flashes in proportion to signal strength Output LEDs: Yellow (output energized)/Red (configuration)
Adjustments	DIP-switch-configurable sensitivity, sensing distance and output configuration
Construction	Housing: ABS/polycarbonate Lightpipes: Acrylic Access Cap: Polyester
Operating Temperature	-40° to +65° C
Environmental Rating	IP67
Connections	2 m, 5-wire attached cable or 5-pin Euro-style QD. QD cordsets are ordered separately.
Certifications	CE and ETSI/EN 300 440



Quick-Disconnect (QD) Cordsets

Style*	Models	Length	Dimensions	Female Pinout
5-pin Euro-style Straight with Shield	MQDEC2-506	2 m		
	MQDEC2-515	5 m		
	MQDEC2-530	9 m		

* For a right-angle cordset, add **RA** to the model number (example, **MQDEC2-506RA**).



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P/N 135780

Dimensions



Brackets



Models	Description
 SMB30SC	<ul style="list-style-type: none"> • 30 mm split clamp with swivel, black reinforced thermoplastic polyester • Stainless steel swivel-locking hardware included
 SMB30MM	<ul style="list-style-type: none"> • 30 mm, 11-gauge, stainless steel bracket with curved mounting slots for versatile orientation • Clearance for M6 (1/4") hardware

Features



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 more sensors, more solutions

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